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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/265,214	03/10/1999	BRUCE A. PHILLIPS	1552(USW-050	4266

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QWEST COMMUNICATIONS INTERNATIONAL INC  
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[REDACTED] EXAMINER

HYUN, SOON D

ART UNIT	PAPER NUMBER
2663	?

DATE MAILED: 07/03/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	09/265,214	PHILLIPS ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Soon-Dong Hyun	2663	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

**A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.**

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) Responsive to communication(s) filed on \_\_\_\_.  
 2a) This action is **FINAL**.      2b) This action is non-final.  
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) Claim(s) 1-21 is/are pending in the application.  
 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.  
 5) Claim(s) \_\_\_\_ is/are allowed.  
 6) Claim(s) 1-21 is/are rejected.  
 7) Claim(s) \_\_\_\_ is/are objected to.  
 8) Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) The specification is objected to by the Examiner.  
 10) The drawing(s) filed on \_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 11) The proposed drawing correction filed on \_\_\_\_ is: a) approved b) disapproved by the Examiner.  
 If approved, corrected drawings are required in reply to this Office action.  
 12) The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) All b) Some \* c) None of:  
 1. Certified copies of the priority documents have been received.  
 2. Certified copies of the priority documents have been received in Application No. \_\_\_\_.  
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
 \* See the attached detailed Office action for a list of the certified copies not received.  
 14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
 a) The translation of the foreign language provisional application has been received.  
 15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                 | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). ____   |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)        | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____ | 6) <input type="checkbox"/> Other: _____                                    |

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### **DETAILED ACTION**

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in the last Office Action.

#### ***Claim Rejections - 35 U.S.C. § 102***

2. Claims 1-6, 11-13, 15, 16, and 20 are rejected under 35 U.S.C. 102(e) as being anticipated by Gultekin et al (U.S. Patent No. 6,215,793).

Regarding claims 1, 3, 4, 11-13, 15, and 21, Gultekin et al (Gultekin) discloses an upstream xDSL modem (a central office xDSL modem, TRX1) and a plurality of downstream xDSL modems (remote terminal xDSL modems), wherein packet based downstream data is broadcasted over a point-to-multipoint connection on downstream xDSL modems connected to a twisted pair copper telephone line. See col. 1, line 29, col. 5, lines 30-41, col. 9, line 63-col. 10, line 3 and FIG. 1.

Gultekin does not explicitly teach the tap, but providing an interface (tap) for each downstream xDSL modem and communications between each xDSL modem and its corresponding interface for the point-to-multipoint communications are inherently required, because the line is shared by the plurality of downstream xDSL modems connected to the twisted pair copper telephone line.

Regarding claims 2 and 16, Gultekin further teaches that the xDSL modem could be a VDSL modem. See col. 9, lines 35-47.

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Regarding claims 5 and 6, Gultekin does not explicitly teach the category of the twisted pair, but the twisted pair comprises a twisted pair of Category 3 or 5.

***Claim Rejections - 35 U.S.C. § 103***

3. Claims 9, 10, 14, 19, and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gultekin et al (U.S. Patent No. 6,215,793) in view of Kaku et al (U.S. Patent No. 4,868,850).

Regarding claims 9 and 19, refer to the discussion for the claims 1 and 15 above.

However, Gultekin does not teach that upstream transmission is done over a point-to multipoint between the upstream xDSL modem and the plurality of remote xDSL modems.

Kaku et al (Kaku) discloses a multipoint type traditional modem communication system, wherein a central office modem (101) is connected to a plurality of local modems (201, 211, 221) using a twisted line via a corresponding tap to save line-use fees. See col. 1, lines 16-35, col. 5, lines 37-47 and FIG. 2.

Those of skill in the art would have been motivated by Kaku to incorporate the concept of the point-to-multipoint connection into Gultekin's xDSL communications to save line-use fees. Therefore, it would have been obvious to one having ordinary skill in the art to incorporate a point-to-multipoint communication system using a twisted pair for xDSL communication system.

Regarding claims 10 and 20, Gultekin+Kaku does not explicitly teach an access protocol to the central modem. Kaku teaches a time division protocol for the access. See col. 5, lines 39-

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40. Those of skill in the art would have been motivated by Kaku incorporate the time division multiple access protocol (TDMA) to take advantage of the TDMA protocol which is well known in the art.

Therefore, it would have been obvious to one having ordinary skill in the art to incorporate a TDMA protocol.

Regarding claim 14, Gultekin+Kaku does not teach whether the central office modem is located outside the central office. Those of skill in the art would have been motivated to locate the central (office) modem outside the central office, i.e., location near to the plurality of local modems, for a higher bandwidth and a plurality of the central modems are connected to the central office via a fiber optic cable. Therefore, it would have been obvious to one having ordinary skill in the art to locate the central modem outside the central office and connect the central modem to the central office via a fiber optic cable.

4. Claims 7, 8, 17, and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gultekin et al (U.S. Patent No. 6,215,793) and Kaku et al (U.S. Patent No. 4,868,850) as applied to claims 1 and 15 above, and further in view of Henderson et al (U.S. Patent No. 6,101,216).

Kultekin + Kaku as discussed above does not teach whether the central modem is connected to outside switching networks. Henderson et al (Henderson) teaches that a DSL modem in the central office is connected to an outside data network. The outside data network of Henderson comprises an ATM network for high-speed access to the Internet. See col. 1, lines 10-20. Those of skill in the art would have been motivated by Henderson to connect the central

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modem of Kultekin to ATM network for high-speed access to an Internet. Therefore, it would have been obvious to one having ordinary skill in the art to connect the central modem to an ATM network.

***Response to Arguments***

5. Applicant's arguments filed 04/21/2003 have been fully considered but they are not persuasive.
6. Applicant argues that Gultekin et al does not teach a point to multipoint xDSL communication using a twist pair. The Examiner doe not agree. With reference to col. 9, line 48- col. 10, line 3, Gultekin et al teaches that the transceivers may negotiate an unidirectional data rate (as in an HFC network for instance) wherein data are downstream broadcasted over a point to multipoint connection. Gultekin et al clearly teaches that the invention can be applied to a telephone line, a coaxial cable, an optical fibre link, a satellite link, and a radio link. Gultekin et al does not limit the point to multipoint communication to an HFC network, i.e., the twist pair is not excluded for the point to multipoint communication. Therefore, Gultekin et al teaches a point to multipoint connection using a twist pair.

***Conclusion***

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

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A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Soon-Dong Hyun whose telephone number is (703) 305-4550. The examiner can normally be reached on Monday-Friday from 8:30 A.M. to 5:30 P.M..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chau Nguyen, can be reached on (703) 308-5340.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 305-3900.

9. Any response to this final action should be mailed to:

Box AF

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Or faxed to: 703-872-9314 for formal communications intended for entry with a label of "EXPEDITED PROCEDURE" for informal or draft communications with a label of "PROPOSED" or "DRAFT" (attn: Art Unit 2663, Soon-Dong Hyun).

*Soon-Dong Hyun*  
CHAU NGUYEN  
SUPERVISORY PATENT EXAMINER  
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S. Hyun  
6/27/03